Title: Stem Cell Maintenance Factor Materials and Methods
Docket No.: 28110/35905A
Page 1 of 9
Fig. 1A

Majority piwi.PRO hiwi.PRO ciwi2.PRO ciwi1.PRO aubergine.PRO	Majority piwi.PRO hiwi.PRO ciwi2.PRO ciwi1.PRO aubergine.PRO	Majority piwi.PRO hiwi.PRO ciwi2.PRO ciwi1.PRO aubergine.PRO hiwi_Hy.PRO
RG SG DG PR SG DG PR SG DG PR	70 70 A L E E A P R R E G G P T L F I R Q Q G Q S K S L S A V Q M H K S E G D P R	110 110 120 130 14 17 18 19 10 10 10 10 10 10 10 10 10 10
R - R	60 R A D P R I E A S R E R R G K D Q K Y L G T I Q P D G G D A Q V G P S I E K S	100 - Y L N T R P A E L V S K K
M	50 50 50 7 7 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9	B R K P W G D Q Y D T G S S - G Q P Q K S S V R - G R R L I T D T G S V R - S I Y Q

Title: Stem Cell Maintenance Factor Materials and Methods Docket No.: 28110/35905A Page 2 of 9 Fig. 1B

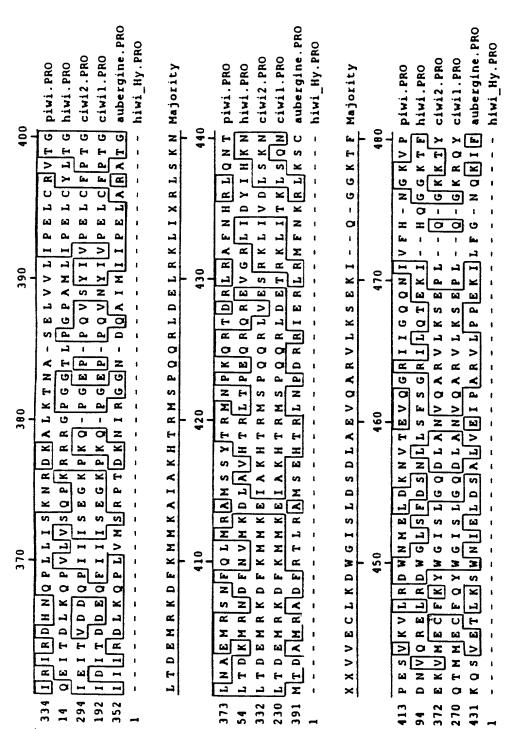
TKPEWRIVHYHVEFEPSIENPRVRMGVLSNHANLL piwi.PROSIYOYHVEFEPTVDSKANREKMLRDNNVTDEI ciwi2.PROSIYOYHVEFEPTVDSKATRENMLRDNVTDEI ciwi1.PRO KRPNWTIYQYRVDETTPDVEATRLRRSFLYEHKGIL aubergine.PRO	Y L E D G M I L F L K E E F E Q N Q M I L V Q K S - D - S L I C Majority Y L E D G L Q L F T T R K E E Q E I T V L S G K S K L D I E Y K piwi. PRO F V F D G M I L Y L K E E W E Q N Q M I E V Q H P I D R S L I C ciwi2. PRO Y I F D G T N M E C I N Q E K A V Q D S P Y V L E L V T K S R A G E N I E aubergine. PRO	K-VGRFLVDDPQTINVLNLILRRSFDGL-LTLVGRNY Majority 210 220 230 240 KFVGFISCAEPRFLQVLNLILRRSMKGLNLELVGRNL piwi.PRO
© 1 1 1 0 1 1	G - G F V F L 143 G S G Y L F L 1	> > + + >

등 18

Title: Stem Cell Maintenance Factor Materials and Methods
Docket No.: 28110/35905A
Page 3 of 9
Fig. 1C

EDW-ASIAL	IEITDLKQPLLISEGKDKQ-PGGP-PQVXYIIPELCRPTG Majority
-----------	---

Title: Stem Cell Maintenance Factor Materials and Methods Docket No.: 28110/35905A Page 4 of 9 Fig. 1D



F16. 10

Title: Stem Cell Maintenance Factor Materials and Methods
Docket No.: 28110/35905A
Page 5 of 9
Fig. 1E

		эко		оно		RO 1	F1G. 1E
Majority	•	piwi.PRO hiwi.PRO ciwi2.PRO ciwi1.PRO aubergine.PRO	Majority	piwi.PRO hiwi.PRO ciwi2.PRO ciwi1.PRO aubergine.PRO	Majority) piwi.PRO hiwi.PRO	ciwi2.PRO ciwi1.PRO aubergihe.PRO hiwi_Hy.PRO	Majority
PGRNNS	520	T P G P R N Y E F P G S G N S G I I I I I I I I I I I I I I I I I I	PDDRLE	E V D D R T G S P N D V L E S P N D V L E I P D D R N G	KYLCVDC 600 KRGYVDR KYLCTDC	RYLCVECK KYLCVEC KYLCVEC	OMNCKL
DIVIWN	510	N W W L L L I I I I I I I I I I I I I I I	PIXGII	I R S P Q E F I I Y D D R T G M R K A I M - I E V D D R T E E P M C V P I R G I S P N D Y L E E P M C V K I N G I S P N D Y L E - I C N P I Y E E I P D D R N G	* * *	3 3 H H	KNKNLMSIATKIALQMNCKL Majority
SN LT		0 4 2 2 X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	> M	L G E P X X X X X X X X X X X X X X X X X X	EDIQIVVULLASDNKTRYDSI SHO SDPKLILCLVPNDNAERYSSI ADTQIVVCLLSSNRKDKYDAI	EDIHHLVVMLADDNKTRYDB EELIHHLVVMLADDNKTRYDS NDPQIVMVVMRSPNEEKYSC	KNLMSI
CGIYRG	200	A P L I S C G I Y R R C C S I Y R R C C S I Y R R C C S I Y R R C C S I Y R R C C S I Y R R C C S I Y R R C C S I Y R R C C S I Y R R C C C S I Y R C C C C S I Y R C C C C S I Y R C C C C S I Y R C C C C S I Y R C C C C C S I Y R C C C C S I Y R C C C C S I Y R C C C C S I Y R C C C C S I Y R C C C C C S I Y R C C C C C C C C C C C C C C C C C C	X M G V Q -	1 X > > X	V V V L L A 580 I L C L V P V V C L L S	L V V M L A V M L A V M L A V M L A V M L A L A L A L A L A L A L A L A L A L	S K K N
ARGVRE	06	0 % < < + 1	ARRLGS 0	11440;	9 2 4	ı 🖍 او و	TLA S
KQ-ADW	. 4	K O F - A D W K O F - A D W K O F - A D W W W W W W W W W W W W W W W W W W	QKFIQE	N T L L D S N S L I D N O K F I E E O K F I A E	A I D Q V V S Y M M M M M M M M M M M M M M M M M M	A I K S V D A I K S V D A I D N A A	QCVTLR
E - G		452 A G 132 D Y - N 409 E G 307 E G 470 V - C D	6 L -	489 EL 169 A A 444 G L L S 342 G L L A 506 E T	G Y K R 523 T Y V R 202 A Y L R	0 U H 1	PVPS

Title: Stem Cell Maintenance Factor Materials and Methods
Docket No.: 28110/35905A
Page 6 of 9
Fig. 1F

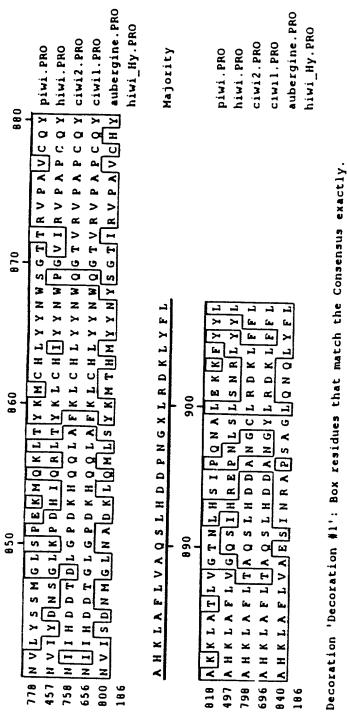
620 630 640	K K P Y S L M S I A T K I A I Q L N C K L piwi. PRO K Q Q T V M A I A T K I A L Q M N C K M hiwi. PRO K D G G E N K N L G S I V L K I V L Q M I C K T ciwi2. PRO K D G G E N K N L G S I V L K I V L Q M I C K T ciwi1. PRO Q K P T G L M S I A T K V V I Q M M A K L AUBERGINE. PRO K Q G N M M S I A T K I A M Q M T C K L hiwi Hy. PRO	VGIDVYHDSTLKGKSVGACVAS-T Majority 660 670 680 IGFDIAKSTRDRKRAYGALIASHD piwi.PRO VGIDCYHDMTAGRRSIAGFVAS-I hiwi.PRO VGYDLYHDSTLKGKTVGACVST-T ciwi2.PRO VGYDLXHDSTLKGKTVGACVST-T ciwi1.PRO VGYDLXHDSTLKGKTVGACVST-T ciwi1.PRO VGEDVCHSPKNKNKSYGAFVATHD aubergine.PRO	HENGTELGNNLTVFVAKALROY-DSND Majority 700 720 CSAFDVLANTLWPMIAKALROY-OHEH piwi.PRO 4 DRGQELVDGLKVCLQAALRAW-NSCM hiwi.PRO HENPTQLGNNLTHFVRALKQYYDNND CIWIZ.PRO HENPTQLGNNLTHFVRALKQYYDNND CIWIZ.PRO HIKGQELSEQMSVNMACALRSY-QEQH aubergine.PRO
610	563 A V P T Q V V T L K T T K 242 P T P S Q C V V A R T L G 524 P I P N Q C V N L R T L A G K S K 422 P I P N Q C V N L R T L A G K S K 580 P V P 9 Q V V T L K V I A P R Q Q 11 P V P S Q C V X A R T L N	GGALWKVEIPLKGLMIV 650 596 GYTPWMIBLPLSGLMTI 275 GGBLWRVDIPLKLVMIV 564 GGALWKVNIPLKNTMIV 617 MGAPWQVVIPLHGLMTV 617 MGAPWQVVIPLHGLMTV	636 L Q Q N S T Y F S T V I E H E N G 690 636 L Q Q N S T Y F S T V T E C S A F 314 N E G M T R W F S R C I F Q D R G 603 S N D F T Q F Y S Q T R P H E N P 501 S N D F T Q F Y S Q T R P H E N P 657 Q K E S F R Y F S T V N E H I K G 83 N P R I T R W F S R C I L Q R T M

등. 1

Title: Stem Cell Maintenance Factor Materials and Methods
Docket No.: 28110/35905A
Page 7 of 9
Fig. 1G

							•															į.	FIG. 1G
Majority		piwi.PRO	niwi.PRO	ciwil.PRO	aubergine.PRO	043. fu - + m + m	Majority		PIWI. PRO	hiwi. PRO	CIW12.PRO	CIWII.PRO	aubergine. PRO	hiwi_Hy.PRO	Majority		piwi. PRO	niwi.PRO Giwi2.PRO	ciwil.PRO	aubergine.PRO	hiwi_Hy PRO	Majority	L
- DAVTDL	760	1 10	CDAVIDK	AVTD	- TLKDRE	7 1 1 2 x	S	008	0	GRLQ	SSLD	S S S K		1 1 1 2 1	TVSPTSY	840	VSPTSY	TVTPVSX	V T P V S Y	VSPTSY		VPAPCOY	
V K	750	V K	VKLVRDA	VKIVRDA	: : : : : : : : : : : : : : : : : : :	•	RFFTQG-	790 1	RFFLNG-	RFFAOSG	RILKOG-	R I L K	RYFTGH	i i i i i i i i i i i i i i i i i i i	OAVROG	630	OQVROG	ON A POR	POFV	SOAVRIGT		NWSGTVR	
KTLVNTE	740	62 C	PYIKNTE	E-		•	VTKRVNT	087	VTRSMNT	VKKRVNT	VTKRVNM	H R R > [SKRIN	**************************************	RYDFYLVS	820 	PYDFYL	RMDFYLV	MDFYLV	RYDFFLV		KLCHLYY	
GVGDGQL	•	6 4 5 5 6		GAGDG		, ,	- RLAFIV	•	VIYAIO -	- RLTVIV	- KLAFII	ม์ × เ	χ Σ :	- R L S V 1 V	TVVTRPE	.	4711Na	TIVIAPE	TTVTRP	DVITIPE	- EMNET	KHQQLAY	
RIIVYRD	730	IVFY	K K	RLILYR		•	SKVQEKI	077	RVQLSPP	IGRGYNP	K V O E K	K V O E K	A G	9 7 X 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	OPGTVVD	910			PGTVV	VPGTVVD	1 1 1 1 1	DTGLGPD	
 RTLPS		자 X 가 2	643 QT L P S	K T L P	696 KIS LPE		AAELS		709 KTEYA	387 K S	AAEL	AAEL	O DEIY	32 V 951	2		Z :	916 NAIN PI	N I V S	763 NP	182	Q H I N N	

Title: Stem Cell Maintenance Factor Materials and Methods Docket No.: 28110/35905A Page 8 of 9 Fig. 1H



Decoration 'Decoration #2': Shade (with black at 10% fill) residues that match hiwi_Hy.PRO exactly.

#C. #

SEQUENCE ALIGNMENT

60	120	180	
266	326	386	
SIKKYLS CPVPSQCV ARTLNKQGMMMSIATKIAMQMTCKLGGELWAVEIPLKSLMVV 60	GIDVCKDALSKDVMVVGCVASVNPRITRWFSRCILQRTMTDVADCLKVFMTGALNKWYKY 120	121 NHDLPARIIVYRAGVGDGQLKTLIEYEVPQLLSSVAESSSNTSSRLSVIVVRKKCMPRFF 180	181 TEMNRT 186
SIKKYLS <u>SD</u> CPVPSQCV <u>L</u> ARTLNKQGMMMSIATKIAMQMTCKLGGELWAVEIPLKSLMVV 266	GIDVCKDALSKDVMVVGCVASVNPRITRWFSRCILQRTMTDVADCLKVFMTGALNKWYKY 326	327 NHDLPARIIVYRAGVGDGQLKTLIEYEVPQLLSSVAESSSNTSSRLSVIVVRKKCMPRFF 386	387 TEMNRT 392
1 207	61 267	121	18.
SEQ ID NO:2	SEQ ID NO:2		SEQ ID NO:2
SEQ ID NO:9	SEQ ID NO:9		SEQ ID NO:9
01 01	01 01	01 01	v. v.

(98%), Positives = 183/186(336.7 bits), Expect = 3.0e-100, = 183/186score = 942Identities